[0131] The projection area **7** can be part of the electronic component **6**, for example can be formed by a housing part of the component, or can lie outside the component **6**, for example can be formed by a table or a wall. The projection device integrated in the electronic component can advantageously project light in specific images, such as, for example pictograms, letters and/or letterings, onto closely situated areas.

[0132] The lens system or the lens **5** intended for projecting the light emitted by the semiconductor body **1** onto a projection area **7** can consist of one or more lenses, each preferably having one or two curved areas. In this case, the lens system or the lens **5** can be fixed directly on the semiconductor body **1** or be held at a defined distance from the semiconductor body **1** by an outer frame. In this case, the lens system or the lens **5** can be shaped such that, depending on the desired application, an image true to scale of the emitted light pattern appears on a planar or curved area perpendicularly, parallel or diagonally with respect to the light exit side of the semiconductor body **1**. The projection area **7** can lie within the electronic component **6** by back projection or outside the component. A miniaturized projection device which can be used flexibly and can project different images is advantageously made possible in this way.

[0133] Our devices are not restricted to the examples by the description oh the basis thereof, but rather encompass any novel feature and also any combination of features, which in particular includes any combination of features in the appended claims, even if the feature or combination itself is not explicitly specified in the claims or examples.

1.-**15**. (canceled)

16. An optoelectronic projection device which generates a predefined image during operation, comprising a semiconductor body having an active layer that generates electromagnetic radiation and a radiation exit side and is an imaging element of the projection device, wherein, to electrically contact the semiconductor body, a first contact layer and a second contact layer are arranged at a rear side of the semiconductor body, the rear side lying opposite the radiation exit side, and are electrically insulated from one another by a separating layer.

17. The optoelectronic projection device according to claim **16**, wherein the second contact layer is in the form of pixels, wherein at least one part of the predefined image arises as a result of the projection of the pixels during operation of the projection device.

18. The optoelectronic projection device according to claim **17**, wherein the pixels are arranged in a two-dimensional segment display.

19. The optoelectronic projection device according to claim **17**, wherein the pixels are arranged in a two-dimensional regular matrix composed of n rows and m columns.

20. The optoelectronic projection device according to claim **16**, wherein the second contact layer has at least one structure in the form of a pictogram, character, letter or lettering.

21. The optoelectronic projection device according to claim **16**, wherein the semiconductor body forms a pattern, and at least one part of the predefined image arises as a result of projection of the pattern during operation of the projection device.

22. The optoelectronic projection device according to claim **16**, wherein the first contact layer is arranged at that side of the second contact layer remote from the semiconductor body, the second contact layer has a plurality of openings, and the first contact layer runs through the openings to the semiconductor body.

23. The optoelectronic projection device according to claim **16**, wherein a partial region of the first contact layer extends from the rear side through a perforation in the active layer in a direction toward the radiation exit side.

24. The optoelectronic projection device according to claim **16**, wherein the first contact layer has at least one electrical connection region that electrically contacts the semiconductor body at a side of the active layer which faces the radiation exit side.

25. The optoelectronic projection device according to claim **16**, wherein the first contact layer has a plurality of electrical connection regions electrically conductively connected to a connection region.

26. The optoelectronic projection device according to claim **16**, wherein the second contact layer is in the form of pixels and has a plurality of electrical connection pads, wherein a pixel is in each case electrically conductively connected to a connection pad.

27. The optoelectronic projection device according to claim **16**, wherein radiation coupling-out structures are arranged in regions on the radiation exit side.

28. The optoelectronic projection device according to claim **16**, wherein an optical element is disposed downstream of the semiconductor body on the radiation exit side.

29. The optoelectronic projection device according to claim **16**, wherein the first and/or the second contact layer reflect(s) part of the electromagnetic radiation, said part being emitted from the active layer in a direction toward the rear side and in a direction of the radiation exit side.

30. The optoelectronic projection device according to claim **16**, wherein the projection device is part of an electronic component selected from the group consisting of a mobile telephone, PDA, laptop, computer, clock and alarm clock.

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